

Unit II: Getting Technical

Content Area: **Technology**
Course(s): **Video Production I**
Time Period: **3 weeks**
Length: **Weeks**
Status: **Published**

Unit Overview

This unit will cover areas of:

- Connectors & Adapters
- Understanding how the TV picture is created
- TV Formats used around the world.

Transfer

Students will be able to independently use their learning to...

- Explain how the connectors and adapters are used in the broadcast industry.
- Identify the the types of connectors used in the broadcast industry.
- Summarize how the television picture is produced.
- Explain the function and importance of sync to video equipment during production.
- Identify the difference between standard definition television and high-definition television.
- Understand the difference between interlace and progressive scan technology.
- Recall how each of the digital television technologies discussed create and image on screen.

Meaning

Understandings

After completing this unit, students will be able to:

- Understand the differences between Audio and Video

- Understand how the signal moves from one piece of equipment to another.
- Understand the difference between the different types of connectors and adapters.
- Understand how a TV Signal works and creates a video picture.
- The different TV formats used around the world.

Essential Questions

What cable plugs into what?

How do I connect one piece of equipment to another?

Why do we use Color Bars?

Is TV different around the world?

Application of Knowledge and Skill

Students will know...

After completing this unit, students will be able to:

- Understand the differences between Audio and Video
- Understand how the signal moves from one piece of equipment to another.
- Understand the difference between the different types of connectors and adapters.
- Understand the TV signal.
- Understand the TV formats used around the world.

Students will be skilled at...

Students will be skilled at...

- Identifying the different types of cables and adapters?
- Demonstrating that they can connect different pieces of equipment together.

Academic Vocabulary

1/8" connector

1/4" connector

adapter

barrel adapter

BNC connector

cable end connector

cannon connector

chassis mount connector

connectors

DIN connector

F-connector

female connector

FireWire

HDMI

jack

male connector

mini connector

phone connector

phono connector

PL259 connector

plug

RCA connector

S-VHS connector

T-connector

USB

XLR connector

Y/C connector

Y-connector

cathode ray tube (CRT)

DLP (digital light processing)

field

frame

genlock

high-definition (HD)

Learning Goal 1

Students will understand the different types of cables and adapters that are use in the Television Production Industry.

CRP.K-12.CRP1	Act as a responsible and contributing citizen and employee.
CRP.K-12.CRP2	Apply appropriate academic and technical skills.
CRP.K-12.CRP4	Communicate clearly and effectively and with reason.
CRP.K-12.CRP6	Demonstrate creativity and innovation.
CRP.K-12.CRP7	Employ valid and reliable research strategies.
CRP.K-12.CRP8	Utilize critical thinking to make sense of problems and persevere in solving them.
CRP.K-12.CRP9	Model integrity, ethical leadership and effective management.
CRP.K-12.CRP10	Plan education and career paths aligned to personal goals.
CRP.K-12.CRP11	Use technology to enhance productivity.
CRP.K-12.CRP12	Work productively in teams while using cultural global competence.

Target 1

Students will demonstrate the ability to identify the different types of connectors and adaptors.

TECH.8.1.12.A	Technology Operations and Concepts: Students demonstrate a sound understanding of technology concepts, systems and operations.
TECH.8.1.12.A.CS1	Understand and use technology systems.

Target 2

Students will demonstrate the ability to connect different pieces of equipment together.

TECH.8.1.12.A.CS2	Select and use applications effectively and productively.
TECH.8.1.12.B.CS1	Apply existing knowledge to generate new ideas, products, or processes.

Learning Goal 2

Students will understand how the tv (picture) signal is created and adjusted.

Target 1

Students will explain how the video signal can be connected from equipment to equipment.

Learning Goal 3

Students will be able to identify the difference between the TV Formats used around the world.

Target 1

Students will analyze the NTSC and High Definition Standards.

Target 2

Students will analyze the SECAM TV format.

Target 3

Students will analyze the PAL TV Format.

Summative Assessment

Performace/Written Assessment

21st Century Life and Careers

Formative Assessment and Performance Opportunities

Written Assessment

Performance Assessment

Accommodations/Modifications

Additional online resources such as videos to explain cables, connectors and adaptors

Supplemental charts of cables, connectors and adaptors available as needed

Enrichment opportunities: Work outside the classroom such as video assist for other classes

Differentiation: 504 accommodations and IEP modifications

Unit Resources

Television Production & Broadcast Journalism Text Book

Television Production & Broadcast Journalism Workbook

Video Cables and Adaptors

Audio Cables and Adaptors